

CLAIMS

Claims 1-10 (cancelled)

11. (Currently amended) An ultra-wideband communication device, comprising:
a first transceiver that communicates information between any of a plurality of ultra-wideband communication devices employing a common physical layer [[structured to communicate]] at a first data rate; and
a second transceiver that communicates information between only those ultra-wideband communication devices having like physical layers, at a second data rate that is greater than or equal to the first data rate, wherein communication at the second data rate is established between those of the plurality of ultra-wideband communication devices having like physical layers, based on communication capabilities recovered as part of the information communicated at the first data rate while employing the common physical layer ~~structured to communicate at a second data rate, with the first and the second transceivers structured to transmit and receive ultra-wideband signals.~~

12. (original) The ultra-wideband communication device of claim 11, wherein the first data rate transmits data at a rate that ranges between about 1 kilobit per second to about 5 megabits per second.

13. (original) The ultra-wideband communication device of claim 11, wherein the second data rate transmits data at a rate that ranges between about 5 megabits per second to about 1 gigabit per second.

14. (original) The ultra-wideband communication device of claim 11, wherein:
the first transceiver communicates at the first data rate; and
the second transceiver is kept off.
15. (original) The ultra-wideband communication device of claim 11, wherein:
the first transceiver communicates at the first data rate; and
the second transceiver kept off until communication at the second data rate is
desired.

16. (Currently amended) A[[An ultra-wideband]] communication network, comprising:

at least two [[ultra-wideband]] communication devices each having a first transceiver and a second transceiver, wherein each first transceiver implements a common physical layer operating at a low data rate for communicating information, and each of the at least two communication devices operate to select at least one physical layer associated with the second transceiver of each of the at least two implementing at least two communication devices, for communication at a high data rate, based on communication capabilities recovered as part of the information communicated at the low data rate using the common physical layer, ~~each device structured to transmit and receive data using at least two data rates, and each device including a first ultra-wideband transceiver structured to communicate at a first data rate and a second ultra-wideband transceiver structured to communicate at a second data rate; and~~

a master [[ultra-wideband]] transceiver capable of communicating with the at least two communication devices via the first transceiver using the common physical layer operating at the low data rate, the master transceiver operating to allocate at least one of a low data rate communication frame and a high data rate communication frame to each of the at least two communication devices such that the at least two communication devices can exchange information using the at least low data rate communication frame and the at least one high data rate communication frame at corresponding low and high data rates ~~structured to communicate with the at least two ultra-wideband communication devices, and structured to direct data through the network selectively using the two data rates.~~

17. (Currently amended) The [[ultra-wideband]] communication network of claim 16, wherein the low and high data rates [[each of the two data rates]] are selected from a group consisting of: one kilobit per second, five megabits per second, 25 megabits per second, 50 megabits per second, 100 megabits per second, 200 megabits per second, 400 megabits per second, 480 megabits per second, 500 megabits per second, and one gigabit per second.

18. (Currently amended) The [[ultra-wideband]] communication network of claim 16, wherein the master ultra-wideband transceiver chooses each of the low and high data rates [[one of the two data rates]] by determining a communication data rate capability of each of the at least two ultra-wideband communication devices.

19. (Currently amended) The [[ultra-wideband]] communication network of claim 16, wherein each of the at least two ultra-wideband communication devices transmit a plurality of pulses.

20. (Currently amended) The [[ultra-wideband]] communication network of claim 19, wherein each of the plurality of pulses has duration that ranges from about ten picoseconds to about one millisecond.

21. (Currently amended) The [[ultra-wideband]] communication network of claim 16, wherein each of the at least two ultra-wideband communication devices transmits a plurality of orthogonal frequency division multiplexing signals.

22. (Currently amended) The [[ultra-wideband]] communication network of claim 16, wherein each of the at least two ultra-wideband communication devices includes a low data rate transceiver and a high data rate transceiver.

Claims 23-28 (cancelled)

29. (New) The communication network of claim 16, wherein the master transceiver directs information through the network comprising the at least two communication devices by communicating configuration information to the at least two communication devices via the first transceiver using the common physical layer operating at the low data rate, said configuration information being used by the at least two communication devices to select modes comprising a low data rate, a high data rate, the common physical layer, and an alternative physical layer.